

000282

PATENT
09/819,109IN THE CLAIMS

Please amend the claims as indicated below:

- B1
Cont.
1. (Currently Amended) A device comprising:
a communication module configured to communicate with a base station in a wireless communication system;
an acoustic echo canceller configured to detect and cancel an acoustic echo generated during a communication between said device and said base station; and
a network echo suppressor receiving an input from said acoustic echo canceller and passing said communication to said acoustic echo canceller, said network echo suppressor attenuating a network echo generated during said communication between said device and said base station by computing a coherence estimate on a block of transmit signal samples of said communication and on a block of receive signal samples of said communication to detect the network echo, wherein each block of samples comprises samples from a previous block and new samples.
 2. (Original) The device of claim 1 wherein said communication module is an AMPS communication module in a dual-mode handset providing AMPS and CDMA services.
 3. (Original) The device of claim 1 wherein said acoustic echo canceller operates in at least two distinct modes of operation.
 4. (Original) The device of claim 3 where said modes of operation include a hands free mode.
 5. (Original) The device of claim 3 where said modes of operation include a handset mode.

000282

PATENT
09/819,109

6. (Original) The device of claim 3 where said modes of operation include a headset mode.
7. (Original) The device of claim 1 wherein said input from said acoustic echo canceller includes a muting parameter.
8. (Original) The device of claim 3 wherein said input from said acoustic echo canceller includes a mode of operation parameter.
9. (Original) The device of claim 1 wherein said network echo suppressor includes a state machine.
10. (Original) The device of claim 1 wherein said network echo suppressor includes a gain module.
11. (Currently Amended) A method comprising steps of:
coupling a plurality of acoustic echo canceller parameters from an acoustic echo canceller to a network echo suppressor;
determining a voice activity parameter;
computing a coherence estimate on a block of [a] transmit signal samples and on a block of [a] receive signal samples to detect a network echo, wherein each block of samples comprises samples from a previous block and new samples;
providing said voice activity parameter and said coherence estimate to said network echo suppressor; and
attenuating said network echo with said network echo suppressor, wherein said attenuated network echo is passed to said acoustic echo canceller.
12. (Original) The method of claim 11 wherein said coupling step comprises setting said plurality of said acoustic echo canceller parameters, and said network echo suppressor reading said plurality of said acoustic echo canceller parameters.

000282

PATENT
09/819,109

13. (Original) The method of claim 11 wherein said determining step comprises using vocoder frame rate determination.

14. (Original) The method of claim 11 wherein said computing step comprises computing a coherence estimate on a block of samples, wherein said block of samples comprises said transmit signal samples and said receive signal samples.

15. (Original) The method of claim 14 wherein said block of samples comprises 128 samples wherein 64 samples of said 128 samples are new samples.

16. (Original) The method of claim 11 wherein said providing step comprises setting said voice activity parameter and said coherence estimate and said network echo suppressor reading said voice activity parameter and said coherence estimate.

B1
Cont.
17. (Original) The method of claim 11 wherein said providing step comprises providing said voice activity parameter and said coherence estimate to a state machine.

18. (Original) The method of claim 11 wherein said attenuating step comprises executing a state machine.

19. (Original) The method of claim 11 wherein said attenuating step comprises setting a receive gain parameter.

20. (Original) The method of claim 11 wherein said attenuating step comprises using a gain module to attenuate a receive signal, said gain module attenuating said receive signal according to a value of a receive gain parameter.

000282

PATENT
09/819,109

21. (Currently Amended) A method for communicating between a base station and a mobile station, said method comprising steps of:

determining a voice activity parameter of said communication;

computing a coherence estimate on a block of [a] transmit signal samples of said communication and on a block of [a] receive signal samples of said communication to detect a network echo, wherein each block of samples comprises samples from a previous block and new samples;

ascertaining a plurality of acoustic echo canceller parameters from an acoustic echo canceller;

providing said voice activity parameter, said coherence estimate, and said plurality of acoustic echo canceller parameters to a network echo suppressor; and

attenuating said network echo with said network echo suppressor, wherein said attenuated network echo is passed to said acoustic echo canceller.

22. (Original) The method of claim 21 wherein said network echo suppressor is used in a dual-mode handset providing AMPS and CDMA services.

23. (Original) The method of claim 21 wherein said determining step comprises using vocoder frame rate determination.

24. (Original) The method of claim 21 wherein said computing step comprises computing a coherence estimate on a block of samples, wherein said block of samples comprises said transmit signal samples and said receive signal samples.

25. (Original) The method of claim 24 wherein said block of samples comprises 128 samples wherein 64 samples of said 128 samples are new samples.

26. (Original) The method of claim 21 wherein said ascertaining step comprises setting said plurality of said acoustic echo canceller parameters, and said

000282

PATENT
09/819,109

network echo suppressor reading said plurality of said acoustic echo canceller parameters.

27. (Original) The method of claim 26 wherein said plurality of said acoustic echo canceller parameters includes a muting parameter and a mode of operation parameter.

28. (Original) The method of claim 21 wherein said providing step comprises providing said voice activity parameter and said coherence estimate and said plurality of acoustic echo canceller parameters to a state machine.

29. (Original) The method of claim 21 wherein said attenuating step comprises executing a state machine.

30. (Original) The method of claim 21 wherein said attenuating step comprises executing a state machine, said state machine setting a receive gain parameter, and using a gain module to attenuate a receive signal, said gain module attenuating said receive signal according to said receive gain parameter.